

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-2 (Canceled)

Claim 3 (Currently Amended) The method ~~as defined in~~ of Claim 9 or 10, wherein the host cell is a prokaryotic cell or an eukaryotic cell.

Claim 4 (Currently Amended) The method ~~as defined in~~ of Claim 3, wherein the host cell is a microorganism.

Claim 5 (Currently Amended) The method ~~as defined in~~ of Claim 4, wherein the microorganism is *Escherichia coli*.

Claim 6 (Currently Amended) The method ~~as defined in any one of Claims 9 and 10 of Claim 9 or Claim 10,~~ wherein the molecular weight of the polypeptide comprising a serine residue is about 1000 to 20000.

Claim 7 (Canceled)

Claim 8 (Currently Amended) The method ~~as defined in any one of Claims 9 and 10 of Claim 9 or Claim 10,~~ wherein the atrial natriuretic peptide is human atrial natriuretic peptide.

Claim 9 (Currently Amended) A method for reducing formation of a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue, comprising:

- (i) culturing, in a medium, transformed host cells that produce a recombinant atrial natriuretic peptide comprising a serine residue and a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue;
- (ii) adding methionine and at least one of histidine, ~~methionine~~ or glycine in an amount effective to reduce said byproduct formation; and
- (iii) reducing the formation of said byproduct polypeptide,

wherein the formation of said byproduct polypeptide is reduced in an amount greater than or equal to 50% as compared to a control medium with no methionine, histidine, or glycine added.

Claim 10 (Currently Amended) A method for producing a polypeptide comprising a serine residue comprising:

- (i) culturing, in a medium, transformed host cells that produce a recombinant atrial natriuretic peptide comprising a serine residue and a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue;
- (ii) adding methionine and at least one of histidine, ~~methionine~~ or glycine to the medium in an amount effective to reduce said byproduct formation; and
- (iii) reducing the formation of said byproduct polypeptide,  
wherein the formation of said byproduct polypeptide is reduced in an amount greater than or equal to 50% as compared to a control medium with no methionine, histidine, or glycine added.

Claims 11-13 (Canceled)

Claim 14 (Currently Amended) The method of ~~any one of claims 9 or 10~~ Claim 9 or Claim 10, wherein the amount of methionine effective to reduce formation of a byproduct polypeptide comprising O-acetylserine residue in place of a serine residue is 3 g/L.

Claims 15-16 (Canceled)

Claim 17 (Currently Amended) A method for reducing formation of a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue, comprising:

- (i) culturing, in a medium, transformed host cells that produce a recombinant atrial natriuretic peptide comprising a serine residue and a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue;
- (ii) adding to said medium at least one of histidine or glycine in an amount effective to reduce said byproduct formation; and

(iii) reducing the formation of said byproduct polypeptide,  
wherein the formation of said byproduct polypeptide is reduced in an amount greater than or equal to 50% as compared to a control medium with no histidine or glycine added.

Claim 18 (Currently Amended) A method for producing a polypeptide comprising a serine residue comprising:

- (i) culturing, in a medium, transformed host cells that produce a recombinant atrial natriuretic peptide comprising a serine residue and a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue;
- (ii) adding at least one of histidine or glycine to the medium in an amount effective to reduce said byproduct formation; and
- (iii) reducing the formation of said byproduct polypeptide,  
wherein the formation of said byproduct polypeptide is reduced in an amount greater than or equal to 50% as compared to a control medium with no histidine or glycine added.

Claims 19-20 (Canceled)

Claim 21 (New) The method of Claim 17, wherein the host cell is a prokaryotic cell or an eukaryotic cell.

Claim 22 (New) The method of Claim 21, wherein the host cell is a microorganism.

Claim 23 (New) The method of Claim 22, wherein the microorganism is *Escherichia coli*.

Claim 24 (New) The method of Claim 17, wherein the molecular weight of the polypeptide comprising a serine residue is about 1000 to 20000.

Claim 25 (New) The method of Claim 17, wherein the atrial natriuretic peptide is human atrial natriuretic peptide.

Claim 26 (New) The method of Claim 17, further comprising adding an the amount of methionine effective to reduce formation of a byproduct polypeptide wherein said amount is 3 g/L.

Claim 27 (New) The method of Claim 18, wherein the host cell is a prokaryotic cell or an eukaryotic cell.

Claim 28 (New) The method of Claim 27, wherein the host cell is a microorganism.

Claim 29 (New) The method of Claim 28, wherein the microorganism is *Escherichia coli*.

Claim 30 (New) The method of Claim 18, wherein the molecular weight of the polypeptide comprising a serine residue is about 1000 to 20000.

Claim 31 (New) The method of Claim 18, wherein the atrial natriuretic peptide is human atrial natriuretic peptide.

Claim 32 (New) The method of Claim 18, further comprising adding an the amount of methionine effective to reduce formation of a byproduct polypeptide wherein said amount is 3 g/L.

Claim 33 (New) A method for reducing formation of a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue, comprising:

- (i) culturing, in a medium, transformed host cells that produce a recombinant atrial natriuretic peptide comprising a serine residue and a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue;
- (ii) adding methionine and one of histidine or glycine in an amount effective to reduce said byproduct formation; and
- (iii) reducing the formation of said byproduct polypeptide,

wherein the formation of said byproduct polypeptide is reduced in an amount greater than or equal to 50% as compared to a control medium with no methionine, histidine, or glycine added.

Claim 34 (New) The method of Claim 33, wherein the amount of methionine effective to reduce formation of a byproduct polypeptide is 3 g/L.

Claim 35 (New) A method for producing a polypeptide comprising a serine residue comprising:

- (i) culturing, in a medium, transformed host cells that produce a recombinant atrial natriuretic peptide comprising a serine residue and a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue;
- (ii) adding methionine and one of histidine or glycine to the medium in an amount effective to reduce said byproduct formation; and
- (iii) reducing the formation of said byproduct polypeptide,  
wherein the formation of said byproduct polypeptide is reduced in an amount greater than or equal to 50% as compared to a control medium with no methionine, histidine, or glycine added.

Claim 36 (New) The method of Claim 35, wherein the amount of methionine effective to reduce formation of a byproduct polypeptide is 3 g/L.